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Mark G. Bocch	7590 08/12/200 etti	EXAMINER		
Patent Legal Staff Eastman Kodak Company 343 State Street Rochester, NY 14650-2201			KRASNIC, BERNARD	
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# Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)	
	10/792,079	GALLAGHER ET AL.	
Office Action Summary	Examiner	Art Unit	
	BERNARD KRASNIC	2624	
The MAILING DATE of this communication ap Period for Reply	ppears on the cover sheet with the c	correspondence address	
A SHORTENED STATUTORY PERIOD FOR REPI WHICHEVER IS LONGER, FROM THE MAILING I  - Extensions of time may be available under the provisions of 37 CFR 1 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statu Any reply received by the Office later than three months after the maili earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNICATION  .136(a). In no event, however, may a reply be tird  d will apply and will expire SIX (6) MONTHS from the, cause the application to become ABANDONE	N. nely filed the mailing date of this communication. ED (35 U.S.C. § 133).	
Status			
Responsive to communication(s) filed on 19	is action is non-final. ance except for formal matters, pro		
Disposition of Claims			
4)  Claim(s) 1-13,20-28,34 and 35 is/are pending 4a) Of the above claim(s) is/are withdra 5)  Claim(s) is/are allowed.  6)  Claim(s) 1-13,20-28,34 and 35 is/are rejected 7)  Claim(s) is/are objected to.  8)  Claim(s) are subject to restriction and/	awn from consideration.		
Application Papers			
9) The specification is objected to by the Examin 10) The drawing(s) filed on 3/03/2004 is/are: a) Applicant may not request that any objection to the Replacement drawing sheet(s) including the corre 11) The oath or declaration is objected to by the E	accepted or b) objected to by e drawing(s) be held in abeyance. Section is required if the drawing(s) is ob	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreig a) All b) Some * c) None of:  1. Certified copies of the priority documer 2. Certified copies of the priority documer 3. Copies of the certified copies of the pri application from the International Burea * See the attached detailed Office action for a list	nts have been received. nts have been received in Applicat ority documents have been receive au (PCT Rule 17.2(a)).	ion No ed in this National Stage	
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08)  Paper No(s)/Mail Date	4)  Interview Summary Paper No(s)/Mail D 5)  Notice of Informal F 6)  Other:	ate	

### **DETAILED ACTION**

1. Applicant's election without traverse of Species II [corresponding to claims 1-13, 20-28, 34 and 35] in the reply filed on 5/19/2008 is acknowledged. Non-elected claims 14-19, 29-33, and 36-44 are canceled. Elected claims 1-13, 20-28, 34 and 35 are pending.

### **Drawings**

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Reference character "104" in Fig. 2.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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# Claim Objections

3. Claims 1, 4, 13, 20, 24-25, 27 and 34-35 are objected to because of the following informalities:

Claim 1, line 4, claim 20, line 8, claim 34, line 5, claim 35, lines 4-5 respectively:

"adjusting the size" should be -- adjusting a size --.

Claim 1, line 6, claim 20, line 10, claim 34, line 7, claim 35, line 7 respectively:

"changing the color" should be -- changing a color --.

<u>Claim 4</u>, line 2: "detecting the locations" should be -- detecting locations --.

Claim 13, line 4: "in the vicinity" should be -- in a vicinity --.

<u>Claim 20</u>, line 6: "measuring the separation of the members" should be -- measuring a separation of members --.

Claims 24-25, line 4 respectively: "the respective" should be -- a respective --.

Claim 27, line 1: "determining a eye" should be -- determining an eye --.

Appropriate correction is required.

## Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

5. Claim(s) 34 is/are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 34 defines a computer program product embodying functional descriptive material (i.e., a computer program or computer executable code). However, the claim does not define a "computer-readable medium or computer-readable memory" and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). The scope of the presently claimed invention encompasses products that are not necessarily computer readable, and thus NOT able to impart any functionality of the recited program. The examiner suggests amending the claim(s) to embody the program on "computer-readable medium" or equivalent; assuming the specification does NOT define the computer readable medium as a

"signal", "carrier wave", or "transmission medium" which are deemed non-statutory (refer to "note" below). The limitation in claim 34 "A computer program product for correcting redeye in a digital image, the computer program product comprising computer readable storage medium having a computer program stored thereon for performing the steps of" is suggested to be -- A computer-readable storage medium encoded with computer-readable program instructions for correcting redeye in a digital image by performing the steps of --. Any amendment to the claim should be commensurate with its corresponding disclosure.

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#### Note:

"A transitory, propagating signal ... is not a "process, machine, manufacture, or composition of matter." Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter." (In re Nuitten, 84 USPO2d 1495 (Fed. Cir. 2007). Should the full scope of the claim as properly read in light of the disclosure encompass non-statutory subject matter such as a "signal", the claim as a whole would be non-statutory. Should the applicant's specification define or exemplify the computer readable medium or memory (or whatever language applicant chooses to recite a computer readable medium equivalent) as statutory tangible products such as a hard drive, ROM, RAM, etc, as well as a non-statutory entity such as a "signal", "carrier wave", or "transmission medium", the examiner suggests amending the claim to include the disclosed tangible computer readable storage media, while at the same time excluding the intangible transitory media such as signals, carrier waves, etc.

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Merely reciting functional descriptive material as residing on a tangible medium is not sufficient. If the scope of the claimed medium covers media other than "computer readable" media (e.g., "a tangible media", a "machine-readable media", etc.), the claim remains non-statutory. The full scope of the claimed media (regardless of what words applicant chooses) should not fall outside that of a computer readable medium.

6. <u>Claim(s) 35</u> is/are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 35 defines a "system". However, while the preamble defines a "system", which would typically be indicative of an "apparatus", the body of the claim lacks definite structure indicative of a physical apparatus. Furthermore, the specification indicates that the invention may be embodied as pure software [see Applicant's specification, page 4 at lines 5-16]. Therefore, the claim as a whole appears to be nothing more than a "system" of software elements, thus defining functional descriptive material per se.

Functional descriptive material may be statutory if it resides on a "computer-readable medium or computer-readable memory". The claim(s) indicated above lack structure, and do not define a computer readable medium and are thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). The scope of the presently

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claimed invention encompasses products that are not necessarily computer readable, and thus NOT able to impart any functionality of the recited program. <u>The Examiner suggests:</u>

1. Amending the claim(s) to embody the program on "computer-readable medium" or equivalent; assuming the specification does NOT define the computer readable medium as a "signal", "carrier wave", or "transmission medium" which are deemed non-statutory; or

2. Adding structure to the body of the claim that would clearly define a statutory apparatus.

Any amendment to the claim should be commensurate with its corresponding disclosure.

Appropriate correction is required.

## Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly

claiming the subject matter which the applicant regards as his invention.

8. Claims 23-26 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re <u>Claim 23</u>, line 1: The limitation "wherein said reducing" renders this claim indefinite and unclear because the Examiner doesn't know if the claim was intended to be dependent upon claim 20 or perhaps dependent upon claim 21.

Re <u>Claims 24-25</u>, line 1 respectively: The limitation "said seed pixels" lacks clear antecedent basis. The Examiner believes it should be -- said seed defects -- and it has been treated as such.

Re <u>Claim 26</u>, line 10: The limitation "most distant from said predetermined limit" lacks clear antecedent basis. It is suggested to be -- most distant from a predetermined limit --

Re <u>Claim 34</u>, line 5: The limitation "said defects responsive" lacks clear antecedent basis because no defects have been identified within the claim language just a relative defect separation value. The limitation "for correcting redeye in a digital image" in lines 1-2 of claim 34 is suggested to be -- for correcting redeye in a digital image, said image having at least one redeye defect pair --.

Appropriate correction is required.

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## Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 10. Claims 1-7, 11-13, 20-28, and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Held et al (US 2002/0126893 A1) in view of Schildkraut et al (US 6,252,976 B1, provided by the Applicant's Information Disclosure Statement - IDS). Re Claim 1: Held discloses a method for correcting redeve in a digital image / automatically correcting color defective redeve area's in an image (see abstract at lines 1-2, the image is digital because pixels are being analyzed and pixels are correspondent to digital images, [0027]), said image having at least one redeve defect / strongest defect located in the eye which is detected (see [0095]-[0096]); said method comprising the steps of adjusting the size / growing by adding and omitting of said defect / strongest defect responsive to said defect to provide adjusted defect / grown seed region defects (see [0024]-[0025] and [0066], the eye diameter distance measurement helps identify the borderlines of the red eye defects, [0094]-[0096], [0098] at lines 1-3, [0099] at lines 6-8 and 11-13, the strongest defect's size is adjusted by growing the defect region into a seed region which shouldn't exceed a certain size limit to avoid bleeding of the grown region); and changing the color / correcting redeye color of said adjusted defect / grown seed region defects (see Fig. 6, [0027], after growing the

seed region defects, the correction mask is produced and used to correct the redeye defects represented by the seed region defects).

However Held doesn't explicitly suggest that the redeye defect is a redeye defect pair and that the separation of the defect pair is measured and used to adjust the defects.

Schildkraut discloses having at least one redeye defect pair (see Schildkraut, col. 13 at lines 39-44, col. 14 at lines 33-48, single redeye defects may be found but because redeye defects normally occur in pairs, a process to determine two candidate redeye defects corresponding to a redeye defect pair [left and right candidate redeye defects] is calculated), measuring a defect pair separation (see col. 14, lines 33-48, distance between the left and right candidate redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter); setting the pupil size limit of said defects of said defect pair responsive to said defect pair separation (see col. 14, lines 33-48, distance between the left and right candidate redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter).

Therefore, it would have been obvious to one or ordinary skill in the art at the time the invention was made to modify Held's method using Schildkraut's teachings by including to Held's defect redeye its corresponding opposite redeye to create a defect pair and by including the additional pupil size limit parameter [calculated from Schildkraut's defect pair separation measurement] to Held's size parameter [Held's size parameter is used as a limit to the defect growing] in order to further enhance the

detection of redeve defects without human intervention (see Schildkraut, col. 13 at lines 45-51).

Re Claim 2: Held further discloses reducing the size of at least one of said defects / strongest defect of said defect pair (see Held, [0094] at lines 8-10, [0099] at lines 6-8 and 10-12, the strongest defect is grown and bounded not to exceed a certain size in order to avoid bleeding of the grown region by *omitting* pixels that should not be including in the seed region defects).

Re Claim 3: Schildkraut discloses calculating a size limit using said defect pair separation (see Schildkraut, col. 14, lines 33-48, distance between the left and right candidate redeve defects [redeve defect pair] is calculated to determine the pupil size limit parameter) and trimming pixels beyond said size limit from said defects (see Held, [0094] at lines 8-10, [0099] at lines 6-8 and 10-12, the strongest defect is grown and bounded not to exceed a certain size [Schildkraut's size parameter was included to Held's size parameter in independent claim 1, see discussion's abovel in order to avoid bleeding of the grown region by omitting pixels that should not be including in the seed region defects).

Re Claim 4: Schildkraut discloses detecting the locations of a pair of seed defects prior to said measuring (see col. 14, lines 33-48, distance between the identified left and right candidate redeve defects [redeve defect pair] is calculated to determine the pupil size

limit parameter). Held discloses growing said seed defects into grown defects prior to said adjusting (see Fig. 6, [0027], after growing the seed region defects, the correction mask is produced and used to correct the redeye defects represented by the seed region defects); and wherein said adjusting further comprises reducing the size of said grown defects (see Held, [0094] at lines 8-10, [0099] at lines 6-8 and 10-12, the strongest defect is grown and bounded not to exceed a certain size in order to avoid bleeding of the grown region by *omitting* pixels that should not be including in the seed region defects).

Re Claim 5: Held in view of Schildkraut further discloses wherein said measuring is prior to said growing (as discussed in the claim 1, Schildkraut's teaching's of a size parameter was included to Held's size parameter in order to set the bounds of the region growing procedure and therefore the size bounds measurement is needed to be calculated prior to region growing or prior to adjusting the size).

Re Claim 6: Held in view of Schildkraut further discloses wherein said seed defects / Held's strongest defect each have a single pixel / center prior to said growing / region growing (as discussed above in claim 1, Schildkraut's teaching's include to Held's defect redeye its corresponding opposite redeye to create a defect pair and Held discloses the strongest defect is used as the center [single pixel] for further extension by growing [see Held, [0096] at lines 1-4]).

As to claim 7, the discussions are addressed with regard to claim 3.

Re Claim 11: Schildkraut further discloses ascertaining a head rotation / tilt of each said defect pair (see Schildkraut, Figs. 17A-17B and 18).

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Re Claim 12: Held further discloses wherein said size limit / border size is based upon an imaging system blur / correction mask filtering associated with said image (see Held, [0024], [0027], the border size limit and correction mask cover the same defective area).

Re Claim 13: Held in view of Schildkraut further discloses determining a spatial operator / correction mask in accordance with said defect pair separation [Schildkraut modified Held's redeye defect to be a pair of redeye defects using defect pair separation criteria]; and using said spatial operator to blend / correction mask filtering the image in the vicinity of said adjusted defects / grown defect regions (see Held, [0024], [0027], after the redeye defects are grown with respect to each defect to seed region defects, the correction mask is produced and used to correct the redeye defects represented by the seed region defects).

As to claim 20, the claim is the corresponding method claim to claims 1 and 4. The discussions are addressed with regard to claims 1 and 4. Further, Held grows each of said seed defects / strongest defect using Held's border edge limit which is used to restrict the region growing procedure to avoid bleeding of the grown region (see Held,

[0094]-[0096]). Schildkraut's teachings of the measurement separation of the members (see Schildkraut, col. 14 at lines 33-48, distance between the left and right candidate redeye defects [redeye defect pair] is calculated to determine the pupil size limit parameter) further specify's Held's size region limit which in turn is then used to adjust Held's grown region by omitting pixels (see Held, [0099] at lines 6-8 and 10-12).

As to claim 21, the discussions are addressed with respect to claim 4.

As to claim 22, the discussions are addressed with respect to claim 6.

As to claim 23 [as best understood by the Examiner], the discussions are addressed with respect to claim 3.

As to claim 24 [as best understood by the Examiner], the discussions are addressed with respect to claims 22-23.

As to claim 25 [as best understood by the Examiner], the discussions are addressed with respect to claims 22-23. Although Held as modified by Schildkraut doesn't explicitly suggest that each seed defect has multiple contiguous pixels, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Held's seed defect / strongest defect consist of multiple contiguous pixels instead of a single pixel because such a strongest defect estimation could have several contiguous pixels relative to the peak (see Held, Fig. 7, new strongest defect estimate may have the peak overlapping several contiguous pixels).

Re Claim 26 [as best understood by the Examiner]: Held further discloses generating a list of pixels of each said seed defect to provide list pixels (see Held, [0094]-[0098]); determining pixels neighboring said list pixels to provide neighboring pixels (see Held, [0094]-[0098]); calculating color value ratios (see Held, Equation 1.2) of each of said neighboring pixels (see Held, [0094]-[0098]); and adding to said list one of said neighboring pixels having the color value ratio most distant from said predetermined limit, when one or more of said neighboring pixels has a color value ratio greater than a predetermined limit (see Held, [0094]-[0098]).

Re Claim 27: Held as modified by Schildkraut further discloses determining an eye separation correction factor (see Schildkraut, col. 14 at lines 33-48, the separation distance is multiplied by .083 to measure the distance in pixels relatively to produce this pupil size limit) and wherein said adjusting is responsive to said defect pair separation and said separation correction factor (see Schildkraut, col. 14 at lines 33-48, the separation distance is multiplied by a factor of .083 to measure the relative distance of pupil size limit in pixels [Schildkraut's size limit is further specifying Held's size limit parameter to improve Held's growing and trimming / omitting defect regions]).

Re Claim 28: Schildkraut further discloses at least one of an age classification and a head rotation / tilt of each said defect pair (see Schildkraut, Figs. 17A-17B and 18).

As to claim 34 [as best understood by the Examiner], the claim is the corresponding computer program product claim to claim 1 respectively. The discussions are addressed with respect to claim 1.

As to claim 35, the claim is the corresponding system claim to claims 1 and 4 respectively. The discussions are addressed with respect to claim 1 and 4.

11. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Held as modified by Schildkraut, and further in view of Lobo et al (US 5,781,650, provided by the Applicant's Information Disclosure Statement - IDS). The teachings of Held as modified by Schildkraut have been discussed above.

Re Claim 8: However Held as modified by Schildkraut fails to explicitly suggest ascertaining an age classification of each said defect pair.

Lobo discloses ascertaining an age classification of each said defect pair (see Lobo, abstract at lines 4-5, Fig. 12a, col. 14 at line 36 through col. 15 at line 12, age classification is determined using distance measured by the difference between the right and left eye [this difference is similar to Schildkraut's redeye defect pair separation measurement]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Held's method, as modified by Schildkraut, using Lobo's teachings by including the age classifier to determine the age

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of the identified eye pair using the difference between the left and right eye [this difference is similar to Schildkraut's redeye defect pair separation measurement] in order to be able to perform automated security surveillance (see Lobo, abstract at lines 22-23).

As to claim 9, the discussions are addressed with regard to claim 11.

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Held as modified by Schildkraut and Lobo, and further in view of Prilutsky et al (US 2005/0031224 A1). The teachings of Held as modified by Schildkraut and Lobo have been discussed above.

Re Claim 10: Held as modified by Schildkraut and Lobo further disclose wherein said size limit is based upon said head rotation of each said defect pair (see Schildkraut, Figs. 17A-17B and 18) and upon an imaging system blur associated with said image (see Held, [0024], [0027], the border size limit and correction mask cover the same defective area). Lobo discloses ascertaining an age classification of each said defect pair (see Lobo, abstract at lines 4-5, Fig. 12a, col. 14 at line 36 through col. 15 at line 12, age classification is determined using distance measured by the difference between the right and left eye [this difference is similar to Schildkraut's redeye defect pair separation measurement]).

However Held as modified by Schildkraut and Lobo fails to explicitly suggest that the size limit is based upon the age classification.

Prilutsky discloses different age groups have different relative eye sizes (see Prilutsky, [0081]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Held's method, as modified by Schildkraut and Lobo, using Prilutsky's teachings by including to Lobo's teachings that the age classification of an individual indicates the eye size boundary limit in order to efficiently identify eye's in redeye applications (see Prilutsky, [0081]).

#### Conclusion

- 13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Luo et al discloses method for detecting objects in digital images; Benati et al discloses automated detection and correction of eye color defects due to flash illumination; Luo et al discloses detecting and correcting redeye in an image suitable for embedded applications; Jarman discloses detection of red eye features in digital images by determination of the profile of image pixel values along a row of values; Ciue et al discloses correcting hybrid flash artifacts in digital images; Zhang et al discloses modification of red-eye-effect in digital images.
- 14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BERNARD KRASNIC whose telephone number is

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(571)270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/ Supervisory Patent Examiner, Art Unit 2624 Bernard Krasnic August 6, 2008